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ANATOMIC, CLINICAL, AND FORENSIC PATHOLOGY
LEGAL MEDICINE

FAX to: 513-352-3158 August 8, 2002

CONFIDENTIAL MEMO TO FILE - Attorney Work Product

Re: Roger Owensby Jr., Deceased

CLINICAL SUMMARY:

On September 27, 2000, Officer David Hunter of the Cincinnati Police Division was involved in an undercover drug investigation that Roger Owensby, Jr. allegedly interfered in by warning several individuals that the police were coming. When he identified himself as a police officer, Mr. Owensby ran away; despite giving chase, Officer Hunter could not catch him. He did not prepare a report or keep any notes about this incident.

On November 7, 2000 Officer Hunter was with Officers Robert Blaine Jorg and Patrick Canton when he spotted Mr. Owensby. He told Officer Jorg, who then stopped Mr. Owensby, questioned him, and checked him for weapons. At that time Mr. Owensby attempted to flee and was taken down by one of the officers. The three officers attempted to handcuff him, but he struggled with them. Officer Jorg was up at the area of the head and upper torso. Officer Hunter worked on the right arm, while Officer Canton handled the left arm. Officer Canton called for assistance on his radio shortly after Mr. Owensby was brought down to the ground. Three other officers arrived. At Officer Canton's request, Officer

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Hunter sprayed him with his mace. Ultimately, they were able to free Mr. Owensby's arms and handcuff him. At that time Officer Canton then proceeded to strike Mr. Owensby in the lower back several times, though he was no longer resisting. Officer Canton and another officer lifted Mr. Owensby to his feet and placed him into one of the police cars (a Gulf Manor cruiser) at the scene. It is unclear if Mr. Owensby was carried/lifted so that his feet slid along the ground, or if he could walk under his own power. Based upon Officer Hunter's testimony, the latter appeared unlikely. Officer Hunter said, "He was placed in the vehicle headfirst. And at one point Officer Canton went around to the other side and grabbed him under either of his underarms, or by the shoulders, and pulled him through to the other side of the car so he would have been laying across the back seat of the Gulf Manor cruiser."

In his statement to Internal Investigation, Officer Jorg stated during the struggle that he "reached up around his head, trapping his head, holding it where I applied what's called the mandibular angle pressure point." To do this, he said he had to stabilize the head by bringing his arm across the top of Mr. Owensby's head and using his other hand to push at the base of the jaw. He ordered Mr. Owensby to stop resisting several times, and finally Mr. Owensby pulled one arm out. Officer Jorg let go of the hold he had and trapped the arm. He brought the arm up behind Mr. Owensby's back and "knelt down on his shoulder of the super scapula area" so he could apply pressure on the nerve there. He stated he was going to help bring Mr. Owensby to the cruiser, but he had to pick up his stuff and therefore other officers walked him to the police cruiser. He did not, however, actually see Mr. Owensby walk. He noted that after Mr. Owensby was placed into the cruiser: "And that's when I believe Officer Spellen showed up and Sergeant Watts. The assistance is then cancelled. Sergeant Watts asked me what happened. What he was wanted for. And we talked about the situation that happened I believe it was two weeks prior. What he was wanted for tonight. We went

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over to check just uh, to get Mr. Owensby's information when we realized he was not breathing." CPR was started at that time, but he could not be resuscitated. At some point after Mr. Owensby had been placed in the cruiser, it was noted there was blood on his arm (i.e., shirtsleeve). Officer Hodge noticed this and cut off the shirtsleeve. They put the sleeve in the trunk of his car, cleaned up his arm, but did not find any source for the blood.

The post mortem examination of Roger Owensby, Jr., was performed by Daniel L. Schultz, M.D., on November 8, 2000, at the Hamilton County Morgue. The body was that of an African-American male weighing 185 pounds, measuring 67 inches, and appearing to be the stated age of 29 years. Livor mortis was purple, non-fixed and posterior. Dr. Schultz noted "The suprascapular area of the back and the lower aspects of the back have several cutaneous petechiae. The petechiae are absent in the area of blanching in the scapular regions. The back of the left arm has several scattered petechiae. The back of the left knee has a few small, faint petechiae." On examining the eyes, he noted, "The conjunctivae have petechiae as well as scleral hemorrhages." These were further defined, as follows: "The right eye has fairly significant inferior scleral hemorrhage and conjunctival hemorrhages. Several petechiae are seen in the conjunctivae of the right eye. The left eye has a few scattered petechiae. The inferior aspect of the left sclera has some hemorrhage." Vomitus was present in the nose and mouth. Trauma was present externally. There was a 1-1/4 inch in diameter group of red abrasions of the "scalp, just above the left eyebrow". Lateral to that group was a 1-1/2 inch long linear red abrasion. There was a 3/8 inch red abrasion of the upper mid forehead. There was a "collection of vertically oriented, short, red abrasions" of the right frontal scalp. The right cheek had a "collection of red abrasions", as did the right upper lip. The upper lip was slightly swollen. There was a shallow 1/16-inch long laceration of the inner right lower lip. There was a 1/4

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inch red abrasion on the anterosuperior left shoulder. Dr. Shultz noted, "The left inframammary aspect of the chest has a collection of very faint abrasions. The anterior aspect of the right axillary area has a collection of faint, red, horizontally directed abrasions." During his examination of the posterior neck and back he made a midline incision that showed 3 to 4 inch in diameter "contusions" in the "deep musculature overlying the spines of the scapulae." There was no significant hemorrhage in the subcutaneous tissues "overlying these muscular hemorrhages". There was no trauma noted of the overlying skin, nor were there any associated rib or scapular fractures. There were three small red abrasions on the anterior right knee. There was a small red abrasion on the anterior aspect of the left leg. Two small abrasions were present on the lateral left forearm. On opening the thoracoabdominal cavities, there was no evidence of additional trauma. The heart weighed 395 grams. The coronary arteries had a left predominance. The left anterior descending coronary artery had a "fifty percent obstructive plaque situated at the mid portion." The coronary arteries were otherwise unremarkable. The left ventricular wall was 1.8 cm thick, while the right was 0.4 cm. The right lung weighed 860 grams and the left 765 grams. The lungs had "diffuse pulmonary congestion and edema". Aspirated food (i.e., vomitus) was present in the bronchi, though they were not obstructed. The stomach contained "300 milliliters of tan-white, soft, slightly starchy materials." The remainder of the organs were unremarkable. On examining the anterior neck he noted no hemorrhage on reflecting the strap muscles. There was no trauma to the hyoid bone or the thyroid or cricoid cartilages. The tongue had a "hemorrhagic bite mark situated in the posterior left aspect." The cervical spinal cord was examined, and it was unremarkable. On reflecting the scalp and opening the calvarium and dura mater, there were no epidural, subdural or subarachnoid hemorrhages noted. There were no skull fractures. The brain weighed 1450 grams and was not swollen. It was fixed for sectioning during the neuropathology conference

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of November 15, 2000. The brain and brainstem were unremarkable on sectioning, with evidence of only mild parenchymal congestion.

Dr. Schultz performed a microscopic examination. A section from the trapezius muscle showed acute hemorrhage within the muscle and adjacent fat, without an accompanying inflammatory reaction. The lungs showed "occasional foci of aspirated loose mucoid material" and bacteria from the mouth. No meat or vegetable material (i.e., "frank food") was identified. The areas of aspiration were "focal and rare". The lungs were markedly congested with patchy intra-alveolar hemorrhage. There was no evidence of acute infection or other significant pathological abnormalities. No intra-alveolar edema was mentioned. However, this is not unusual because histological processing can cause the removal of water. Then edema cannot be identified. The tongue showed acute intramuscular hemorrhage without an accompanying inflammatory reaction. The remainder of the sections examined were consistent with the gross findings.

A toxicological examination of the blood only detected the presence of marijuana. Based on his autopsy, Dr. Schultz determined the cause of death to be "Mechanical Asphyxia" and the manner "Homicide (police intervention: asphyxiation during restraint attempts)". In his diagnoses he listed the various traumatic injuries described above. Also under the heading "Mechanical Asphyxia" he listed the following three items: "a) conjunctival petechiae with scleral hemorrhages", "b) terminal emesis" and "c) hemorrhagic bite mark of left side of tongue". In his testimony, apparently in the trial of Officer Jorg, Dr. Schultz also stated that his findings could indicate some type of chokehold had been applied, as this would not necessarily cause anterior neck hemorrhages. Also, he called a chokehold a form of mechanical asphyxia. He felt the deep muscle hemorrhages of the upper back were not likely due to a blow from a weapon or fist but were "more of a deep, directed kind of

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grinding type injury." When asked if they could be from a heavy person kneeling on the victim's back, he said "yes". He did not feel the marijuana found in the blood contributed to his death. In his testimony in the case against Officer Canton, dated October 30, 2002 (presumably meant to say 2001), he stated that petechial hemorrhages can develop if enough pressure is applied to the back, sufficient to prevent the chest wall from moving. In such cases oxygen cannot be brought in as the lungs cannot expand. Also, there will be congestion of the head and neck with breakage of blood vessels there, and the development of petechiae. He again discussed various chokeholds and the changes they could induce.

I have examined the autopsy photographs and can find no significant difference with the descriptions provided by Dr. Schultz. Due to natural skin pigmentation, orientation of the head and neck in some of the pictures, and small size of the pictures, I cannot opine, with any medical degree of certainty that the head and neck are congested. In the right lateral view of the upper half of the body, the head and neck do seem dark, suggesting the possibility that they are congested.

I have examined the microscopic autopsy tissue slides and can find no significant difference with the descriptions provided by Dr. Schultz, except to say that the coronary artery only shows 30 to 40% obstruction rather than 50%, as he stated. The sections of the heart show focal subendocardial or papillary muscle fibrosis. Also, there are areas of interstitial fibrosis in several sections that were taken from the area of the valves and this is a normal finding. The lungs do not show evidence of aspirated material in the alveoli or damage to the alveoli from gastric acid, or of any inflammatory reaction.

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MEDICOLEGAL QUESTIONS:

1. What is mechanical asphyxia? What do petechial hemorrhages indicate?

Mechanical asphyxia is a form of suffocation wherein "pressure on the outside of the body prevents respiration." (Forensic Pathology, Second Edition by Dr. Vincent J. DiMaio and Dr. Dominick DiMaio, pp. 240-1). In their book, mechanical asphyxia is divided into three subheadings: traumatic asphyxia, positional asphyxia, and "riot-crush" or "human pile" deaths. In traumatic asphyxia a "heavy weight presses down on an individual's chest abdomen, making respiration impossible." A common example, which I have seen several times, is from a car slipping off a jack and pressing on a person under it, or a car rolling over onto a person who has been partially or completely ejected during a motor vehicle accident. A human being pushing down on someone with sufficient force could also induce such asphyxia. The authors note: "At autopsy, there is congestion of the head, neck, and upper trunk with numerous petechiae in these areas, the sclerae, the conjunctivae and the periorbital skin. Retinal hemorrhages may also be present. Internally, there is often no evidence of trauma in spite of the heavy weight on the chest."

Dr. Bernard Knight discusses traumatic asphyxia in his book Forensic Pathology, Second Edition. He notes: "Individual cases of traumatic asphyxia can occur when one person allows the whole weight of his body to fall upon another for a protracted period. This may happen in sexual intercourse, especially when one or both parties are incapacitated by drink and drugs." He described similar external findings to those listed above, although he stated that the "conjunctivae and sclera may be so engorged with blood that the haemorrhagic tissue actually bulges out through the lids, completely obliterating the whites of the eyes. ... There may be copious bleeding from the ears and nostrils." Dr. Knight notes: "Where the compression has been caused by pinning under a solid

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object - as opposed to soil, sand or squeezing in a crowd - there may be local bruises and abrasions from the weight of a vehicle or heavy beam". "Internally, the congestion is less marked than on the surface, but the lungs are usually dark and heavy and may well have subpleural petechial haemorrhages". In my experience, I have typically found the lungs to be heavy secondary to pulmonary congestion and edema in cases of mechanical asphyxia.

Mechanical Asphyxia is also discussed in the chapter entitled "Asphyxia" (pp. 484-5), in Spitz and Fisher's Medicolegal Investigation of Death, Guidelines for the Application of Pathology to Crime Investigation, Third Investigation. Dr. Spitz notes: "Homicide by compression of the chest, as by kneeling or sitting on the back of a victim, is rare. Such deaths have occurred in the course of police arrests, during attempts to handcuff a violent prisoner, facedown on the floor or the back seat of a police cruiser. Forcing the arms backward, while the chest is pushed forward by the weight of the officer, may lead to immobilization of the chest and death, especially if the prisoner is agitated or under the depressing effect of alcohol or drugs."

In this case there is a history given by Officer Jorg that he put his weight on Mr. Owensby's back while he applied a "mandibular angle pressure point". The autopsy clearly showed deep hemorrhages in both sides of Mr. Owensby's back. In my opinion these hemorrhages were created by the complete weight of Officer Jorg's body directed through his knees into Mr. Owensby's back. This weight forced the victim's chest into the ground and would have prevented respiratory movements. The hypoxia/anoxia this would have induced would not have led to immediate death. Rather, it would lead to both a cardiac arrhythmia and CNS disturbance. As the oxygen flow to his brain decreased, he would begin to stop struggling; be unable to speak; become stuporous and then unconscious; and finally would go into a coma before death. The officers would likely interpret this as a

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lessening in his struggle, to finally complete lack of resistance. This could have happened in seconds or minutes, dependent upon the degree of hypoxia. The hypoxia would also affect the heart by decreasing the oxygen to the heart muscle, which would lead to an arrhythmia. This would potentiate the CNS disturbance. In the materials provided, I could find no evidence that Mr. Owensby could have walked to the police cruiser under his own power. Rather, given the likely degree of hypoxia and its effects, I would believe Officer Hunter's description that the other officers carried Mr. Owensby by lifting him under the arms and basically dragging his feet. It is impossible to say if he was already dead prior to being carried, or if he died shortly after being placed in the car. However, I believe he was already suffering from the deleterious effects of the hypoxia as they moved him to the cruiser. Additionally, it is not uncommon for people who are dying, whether from natural or unnatural causes, to vomit; or for an individual to appear to be vomiting even after death during CPR. In this case I only note evidence of terminal vomitus, based on the minimal amount of foreign material in the airways of the lungs without any in the alveoli. This indicates he was either not breathing or able to inhale forcefully (with the latter the finding in mechanical asphyxia as the chest becomes fixed and inspiration/expiration become impaired) as the vomiting occurred. Therefore, this process would not have contributed to his death.

Dr. DiMaio and Dr. DiMaio (p. 229) describe petechiae as "pinpoint hemorrhages produced by rupture of small vessels, predominantly small venules. Rupture appears to be mechanical in etiology and is caused by sudden overdistention and rupture of the vessels following abrupt increases in intravascular pressure." It should be noted that petechial hemorrhages can occur in a number of circumstances, both natural and unnatural. However, with the history given of an officer kneeling on his back, the finding of contusions in his upper back, and the heavy lungs with pulmonary congestion and edema, it is my opinion that the petechiae that were present were

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directly related to mechanical asphyxia. As I have stated above, I cannot rule out that strangulation, in the form of a chokehold, also could have contributed to their formation. However, without obvious testimony to that fact by eyewitnesses, I cannot render an opinion with a reasonable degree of certainty regarding that point at this time. (Note that if such testimony exists, please forward it for my review.)

2. Did Mr. Owensby's coronary atherosclerosis cause his death? Is there evidence of other cardiac disease?

In my opinion there was only mild atherosclerosis present. The microscopic slide only showed 30 to 40% obstruction of the lumen of one coronary artery. When such vessels are sectioned, fixed and prepared for histological sectioning, the vessel shrinks, constricting the lumen and exaggerating any atherosclerosis (i.e., artifactually increasing the percentage of the lumen that is blocked). Therefore, in my opinion, there is no possibility that the section I examined ever represented 50% occlusion. Additionally, there was no evidence of thrombosis or plaque rupture. A single focus of mild atherosclerosis would never have caused his death. Even if the atherosclerotic narrowing reached the lower limit of moderate blockage (i.e., 50%), this would not cause sudden death unless there was evidence of associated plaque rupture or thrombosis leading to sudden luminal occlusion, which I have already indicated was not present in this case. In their absence, the only way such a focus of atherosclerosis could have played any role in his death would be if there was a significant hypoxic event, which I have illustrated did occur due to mechanical asphyxia. Thus, if there were moderate atherosclerosis, it would at most have only contributed to his death and not be the primary cause, which was mechanical asphyxia. There is no way to even accurately say what the degree of contribution would have been. However, given the absence of significant microscopic changes to suggest previous ischemia and the very focal

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nature of the partial blockage, it is my opinion that any possible contribution to his death would have been quite minimal.

Based on the autopsy findings, I do not believe there is evidence of any significant heart disease. Dr. Shultz described the left ventricle as measuring 1.8cm. The heart weight with respect to his body weight would be at the upper limit of normal. The single focus of atherosclerosis described above would not prevent the uninvolved portion of the arterial wall at the plaque site from dilating sufficiently to compensate for any increased demand. The microscopic examination does not show evidence of acute, recent, or remote myocardial infarction, or of any other significant pathological abnormality. Therefore, it is my opinion that Mr. Owensby did not have any significant underlying cardiac disease. Accordingly, it is my opinion that in the absence of the hypoxic episode caused by mechanical asphyxia, Mr. Owensby would not have died on that day.

3. What is pulmonary (i.e., intra-alveolar) edema? What is its significance in this case? Can tests be done on the shirtsleeve to prove the stain was caused by pulmonary edema?

Simply put, pulmonary edema is the presence of the ~~intravascular fluid (i.e., blood)~~ moving out of the blood vessels into the alveolar spaces. This fluid is predominantly water, proteins, and some blood cells. There are many conditions that can lead to its development such as congestive heart failure, heroin overdose, drowning or mechanical asphyxia. Therefore, the pulmonary edema cannot be utilized as a marker to point to a specific cause of death but must be considered with all the other findings to ascertain the cause. In mechanical asphyxia, the pressure on the chest leads to marked engorgement of the vessels in the lungs and results in the development of edema fairly rapidly, typically within a few minutes. In this case the lungs were very heavy and showed diffuse pulmonary congestion

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and edema. This finding, along with the petechial hemorrhages, hemorrhages in the back, and history of the events (described above), are supportive of the determination of mechanical asphyxia. This edema, or the petechial hemorrhages described above, would not form, however, if the airways were simply blocked by the arm covering the nose and mouth (i.e., smothering). If the arm was over/around the anterior neck (i.e., strangulation), and the pressure varied as the chokehold was applied (i.e., if pressure drops enough, blood supply to the brain would momentarily be returned, but likely with continued venous obstruction), then the over-distention of the veins/venules could lead to the formation of petechial hemorrhages. Such pressure variation, however, can hemorrhage in the soft tissues of the neck. (I would need testimony from other witnesses besides Officer Jorg to comment further on any possible chokehold and its effects.)

I do not know of any test to reliably say a stain on clothing is, in fact, due to pulmonary edema. Furthermore, I do not see how it can be used to prove strangulation in the absence of neck trauma. The mechanical asphyxia due to pressure on his back would lead to the pulmonary congestion and edema noted at autopsy. Therefore, even if Officer Jorg's arm was simply in front of Mr. Owensby's face, then the pulmonary edema generated by the compression of the chest could have stained the shirtsleeve.

4. What are chokeholds?

Typically, there are two chokeholds used by law enforcement, those being a bar arm hold and a carotid sleeper hold. In the bar arm hold, the forearm goes straight across the neck compressing the airway, with or without compression of the great vessels of the neck. If continuous force is applied, without the force being so great as to fracture the larynx or a tracheal ring, then no evidence of trauma may be seen. In the carotid sleeper hold, the forearm and upper arm form a V over the

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anterior neck, compressing the great vessels without compressing the airway. Again, this may be accomplished with no obvious internal neck trauma. However, in both cases if the victim struggles too much by twisting his head, then trauma typically occurs while the hold is being used. Both holds can lead to unconsciousness if held long enough, and even to death if held for too long. These holds do not constrict the movement of the chest, and therefore would not be a form of mechanical asphyxia. Rather, they are a form of strangulation. As I have already said, there is direct evidence of mechanical asphyxia based on the information provided by Officer Jorg and the autopsy finding of deep hemorrhages in the upper back. However, there is nothing in the autopsy that can support or rule out the application of a chokehold. To further consider this possibility, I would require more information: testimony of independent witnesses who could describe how Officer Jorg's arm(s)/hand(s) were in relation to Mr. Owensby's neck; whether Mr. Owensby appeared to be struggling at this time; and a detailed description of the "mandibular angle pressure point". Inquiries should also be made to receive all training manuals that detail this technique and any information that indicate it was demonstrated to Officer Jorg.

OPINION:

After completion of my evaluation and analysis of all the materials referred to above, it is my professional opinion, based upon a reasonable degree of medical certainty, that the cause of death of Roger Owensby Jr. was mechanical asphyxia due to compression of his chest by Police Officer Robert Blaine Jorg, who was kneeling on his back. The history given by Officer Jorg, the hemorrhage/contusions in the "deep musculature overlying the spines of the scapulae", the numerous petechiae, and the presence of pulmonary congestion and edema all support the diagnosis of mechanical asphyxia.

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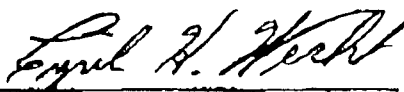
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The information provided also indicates that Mr. Owensby could not have walked after being handcuffed, indicating to me that he had suffered significant hypoxia.

In my opinion, there is no evidence of significant cardiac disease; the single focus of atherosclerosis would not have led to his death. At most it might have been a minor contributing factor to his death by increasing the likelihood of the development of a fatal cardiac arrhythmia in the face of significant hypoxia.

One only has to look at the timing of his death to realize how it would be completely illogical to argue that the struggle to restrain Mr. Owensby played no role in his death. He was found dead within minutes of its completion, and there is nothing to suggest that he could not have died before he was placed in the police cruiser. While I cannot rule out the possibility that a chokehold was also employed by Officer Jorg during this incident, I also cannot state with a reasonable degree of medical certainty that a chokehold was applied. I will need to see any testimony from independent witnesses (i.e., others, or police officers not involved in the incident) with regards to any alleged chokehold. Furthermore, I will need any information you can obtain on the procedure known as a "mandibular angle pressure point" hold.

I reserve the right to change any of the above opinions if additional material is made available for my review.


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